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## NOTES ON TWO SPECIES OF PHENACOMYS IN OREGON

BY STANLEY G. JEWETT

In the dense forests of the Pacific Northwest, where the sun seldom penetrates the heavy growth of firs and spruces to mother earth, live two species of the most interesting of our small mammals, *Phenacomys longicaudus* in the tree tops, and *Phenacomys albipes* on the moss-covered floor of the forest.

***Phenacomys longicaudus***

From my knowledge of the state of Oregon it seems to me that the lower Rogue River watershed in Curry County is the center of abundance of these little tree mice. My first visit to this locality was during the fall of 1917. One rainy night while talking to two boys about trapping the various small fur-bearing mammals of the region it occurred to me to ask if they had ever seen "a red mouse that lives in trees." Both boys began at once to tell me of their pets that had recently escaped. Much to my surprise they had been keeping several individuals of this species as pets, and were quite familiar with their habits. I left the ranch next morning at daybreak and while passing through the forest saw numerous nests of the species in fir and spruce trees, ranging from fifteen to eighty feet or more from the ground. Most of the nests were saddled on branches against the bole of the tree, but a few were noted well out on the branches.

Most of the nests are fairly compact round balls about twelve to eighteen inches in diameter, composed of dry twigs and built by the mice occupying them. Other larger and more bulky nests were evidently built by wood rats and later occupied by these mice. Usually they are located in Douglas fir, but several have been noted in Sitka spruce near the coast. Two nests in the barn-yard at the John Adams ranch in Curry County were built about ten feet from the ground in second-growth firs. These nests were as large or larger than a bushel basket and composed of dry fir twigs. The trees stood about twenty-five feet apart and each was occupied by an adult mouse, which proved to be a male and a female. Mr. Adams told me that the nests had been there ten years to his knowledge, and as far as he could remember were the same as when he located his buildings on the ground. He took it for granted they were wood-rat nests, which are very common in that locality. These nests were pierced by numerous tunnels leading to the inner nests of shredded fir leaves.

So far as I have learned the food of this mouse consists entirely of the soft pulp contained in fir and spruce leaves, and the inner bark of the tips of twigs of the same trees. The feeding process is interesting. The mouse sits hunched up and uses its forefeet as hands. Nipping off a twig with the razor-like incisors, he next chooses a leaf, which is drawn through the teeth lengthwise; this process splits the leaf in the exact center and the fleshy part is left in the mouth. The amount of food in each leaf is very small but the animal is a rapid feeder and soon disposes of a lot of leaves. The skin of the mouth and throat of two specimens collected was stained a rich green color. Most occupied nests have a few food twigs on them, this, with the fact that the shredded leaves are used as nest material, is very good evidence that most of the feeding is done in the nest or on its roof.

When the mouse is disturbed in the nest it will sometimes run out on a limb, down the tree head foremost, or will jump to the ground. The two mice occupying the nests at the Adams Ranch, above referred to, both jumped to the ground when I prodded the nests with a pole. They can run rapidly both in the tree and on the ground. At the Lowery Ranch on Rogue River I saw numerous nests in a second growth of Douglas firs back of the house. Inducing a small boy to climb to a likely looking nest I kept careful watch to see if anything left it when he began the ascent. Nothing happened, so I asked him to dissect the nest and throw the material to me. No mouse was seen, but as the nest had been recently occupied I was not satisfied. After careful search I saw the little fellow sitting upright on a dead twig about ten feet above my head. He was sitting hunched up in almost a round ball with the long tail hanging over to one side. How, and when that mouse reached his perch without either of us seeing him will always be a mystery to me. Although I am convinced that these mice colonize to a certain extent I have never heard of two adults occupying the same nest.

The two mice taken at the Adams Ranch were captured alive and placed in a box with part of their nesting material and a few fir twigs for food. As I was leaving the ranch next morning I put box and mice in my pack-sack. The next three days I packed these mice over about sixty miles of rough forest trails only to find them in a dying condition when I reached the coast. They ate quantities of fir twigs and leaves supplied them fresh daily, but as the weather was warm, the continual jostling on my back was too much for them. While handling live specimens I have never had one attempt to bite.

This species was first described by True (Proc. U. S. Nat. Mus., vol. 13, p. 303, 1890) from a specimen found dead on a road near Marshfield, Coos County, Oregon. The present range of the species has not been determined but it has been found over a large part of Curry County; near Eugene, Lane County; at Bonneville, Multnomah County; near Forest Grove in Washington County; and nests possibly of this species at Nehalem in Tillamook County. From their habits it is no wonder the earlier collectors failed to find more of them. How many collectors look in the tree tops for mice?

### **Phenacomys albipes**

This mouse was first described by C. Hart Merriam (Proc. Biol. Soc. Wash., vol. 14, pp. 125-126, July 19, 1901) from a specimen collected in the red-woods forest near Arcata, Humboldt County, California, by Walter K. Fisher during 1899. From that time until May, 1914, Fisher's specimen remained unique. On May 18, 1914, while running a line of oat-meal baited traps near Vida, Lane County, Oregon, I took a fine adult male of *P. albipes* in a wooden mouse trap set among mossy stones along a small stream that flows through a heavy forest of Douglas fir (See Oregon Sportsman, vol. 3, no. 2, p. 37). The forest floor was well covered with sword fern, moss, and a tangle of vine maple. Considerable trapping was done in the same locality but no more specimens were taken, and nothing more learned of the habits of this species. The following month Mr. Vernon Bailey visited Oregon and saw the specimen I had taken. In company with L. J. Goldman, A. C. Shelton and M. E. Peck, all experienced collectors, Mr. Bailey went to Vida and trapped that section thoroughly, but without success as far as *P. albipes* was concerned. During that season the entire McKenzie River region was well worked by members of the Biological Survey and representatives of the Oregon Fish and Game Commission without locating more of the species. Although considerable collecting was carried on west of the Cascades in Oregon during 1915 and 1916 we learned no more of the species until 1917. During September of that year, in company with my wife and several friends I went to Netarts Bay in Tillamook County, Oregon for a few days' vacation. My former experience in that locality showed me that the possibilities were excellent for small mammals so I put eight old mouse traps in my outfit before starting. A day or two after arriving at the beach I set the traps in a salmonberry thicket back of camp. I expected to catch

some *Microtus*, but much to my surprise on visiting the traps next morning one held a specimen of *P. albipes*. During the next few days I took two more of these rare mice, as well as specimens of *Microtus oregonus*, *Peromyscus m. rubidus*, and *Sorex vagrans*, all within twenty-five yards of each other. Along a small stream nearby I took one each of *Spilogale latifrons* and *Neotoma c. fusca*, in the only steel trap I had. As the *Spilogale* was an old male I have often wondered how many *albipes* he had "collected."

From the foregoing it would appear that *Phenacomys albipes* is far from common in the state of Oregon. We know practically nothing of its habits, except that it feeds on the ground in dense forested areas. All those I have taken were trapped with oatmeal for bait.

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## A NEW GENUS OF RODENTS FROM THE MIDDLE EOCENE

BY W. D. MATTHEW

In the collections obtained by the American Museum expeditions of 1903-06 in the Bridger Basin, Wyoming, were several skeletons of rodents. Some, but not all, of these were prepared and described in 1909, in an article by the present writer. During this winter a number of specimens in the Bridger collection have been prepared for study. Among them is a very well preserved rodent skeleton, consisting of the skull, jaws, fore and hind limbs and feet, pelvis and some vertebrae. It appears to belong to "*Paramys*" *delicatissimus* Leidy, 1871, but is clearly not congeneric with the type of *Paramys*, *P. delicatus*. The following generic diagnosis may serve to indicate the principal differences observed:

### **Reithroparamys** gen. nov.

*Type*, *Paramys delicatissimus* Leidy, from the Bridger formation, Middle Eocene of Wyoming.

*Genotype*, Am. Mus. No. 12561, skull, jaws, and most of skeleton.

Incisors narrow, deep, laterally compressed, the upper pair slightly grooved on the anterior face. Cheek teeth sciuroid, much as in *Paramys*, and not distinguished by any clearly generic differences. Skull with two parallel raised postorbital crests and a lyrate area behind, instead of the single median crest of *Paramys*. Tympanic bulla of medium size, ossified except towards the posterior margin; no bony meatus. The bulla in *Paramys* is not ossified, nor is it so in any of the nearly related genera or subgenera from the Middle and Upper Eocene, so far as is known. Limbs comparatively long and slender, the hind foot bones long and slim, the fore foot bones relatively small. First metatarsal long but slender, fourth heavier than third, fifth much shorter but comparatively stout.